



**Department of Energy**  
Office of Civilian Radioactive Waste Management  
Yucca Mountain Site Characterization Office  
P.O. Box 98608  
Las Vegas, NV 89193-8608

**JAN 27 1995**

**Julie A. Canepa**  
Technical Project Officer  
for Yucca Mountain  
Site Characterization Project  
Los Alamos National Laboratory  
University of California  
EES-13, Mail Stop J521  
P.O. Box 1663  
Los Alamos, NM 87545

**VERIFICATION OF CORRECTIVE ACTIONS AND CLOSURE OF CORRECTIVE ACTION REQUEST (CAR) YM-94-079 AND CAR YM-94-081 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION'S (YMQAD) AUDIT YMP-94-08 OF LOS ALAMOS NATIONAL LABORATORY (SCPB: N/A)**

The YMQAD staff has verified the corrective actions to CARS YM-94-079 and YM-94-081 and determined the results to be satisfactory. As a result, the CARS are considered closed.

If you have any questions, please contact either Robert B. Constable at (702) 794-7945 or Thomas J. Higgins at (702) 794-7173.

**Richard E. Spence, Director**  
Yucca Mountain Quality Assurance Division

YMQAD:RBC-1890

Enclosures:  
CARS YM-94-079 and  
YM-94-081

cc w/encls:  
J. H. Hines, OQD, AL  
J. G. Spraul, NRC, Washington, DC  
S. W. Zimmerman, NWPO, Carson City, NV  
N. Z. Elkins, LANL, Las Vegas, NV  
S. L. Bolivar, LANL, Los Alamos, NM  
J. B. Tillman, LAAO

cc w/o encls:  
W. L. Belke, NRC, Las Vegas, NV  
D. G. Sult, YMQAD/QATSS, Las Vegas, NV

*NH03/11  
WM-11  
102.7*

YMP-5

020105

9502030294 950127  
PDR WASTE  
WM-11 PDR

**ORIGINAL**  
THIS IS A RED STAMP

OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.

8 CAR NO.: YM-94-081  
PAGE: 1 OF 1  
QA

**CORRECTIVE ACTION REQUEST**

1 Controlling Document  
LANL-YMP-OP-03.5, Revision 2

2 Related Report No.  
YMP-94-08

3 Responsible Organization  
LANL-YMP

4 Discussed With  
C. Tait/M. Clank

5 Requirement:  
Paragraph 6.6.1 of OP-03.5, Revision 2 requires that data be evaluated and a statement is entered into the notebook explaining the acceptance or rejection of the data.

6 Adverse Condition:  
Contrary to the above requirement, data recorded in the following scientific notebooks had no evidence of any such evaluation.

- \* TWS-INC-01-93-12
- \* TWS-CST-02-94-03
- \* LA-CSI-03-94-013
- \* TWS-INC-06-93-09
- \* TWS-INC-01-93-10

9 Does a Significant Condition Adverse to Quality exist? Yes \_\_\_ No X  
If Yes, Check One:  A  B  C  D  E

10 Does a stop work condition exist? Yes \_\_\_ No X; If Yes - Attach copy of SWO  
If Yes, Check One:  A  B  C

13 Response Due Date:  
20 Working Days from Issuance

11 Required Actions:  Remedial  Extent of Deficiency  Preclude Recurrence  Root Cause Determination

12 Recommended Actions:  
\* Comply with existing procedures.

7 Initiator Thomas J. Higgins <i>[Signature]</i>	8-23-94	14 Issuance Approved by: QADD <i>[Signature]</i> for Date 8-24-94
15 Response Accepted QAR <i>[Signature]</i>	Date 9-30-94	16 Response Accepted QADD <i>[Signature]</i> for Date 10-5-94
17 Amended Response Accepted QAR	Date	18 Amended Response Accepted QADD
19 Corrective Actions Verified QAR <i>[Signature]</i>	Date 1-24-95	20 Closure Approved by: QADD <i>[Signature]</i> for Date 1-26-95

OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.

CAR NO. \_\_\_\_\_  
PAGE \_\_\_\_\_ OF \_\_\_\_\_  
QA

**CORRECTIVE ACTION REQUEST (CONTINUATION PAGE)**

**CORRECTIVE ACTION RESPONSE FOR CAR NO. YM-94-081: Page 1 of 1**

**A. Remedial Action:**

NOTE: LANL-YMP-QP-03.5, R2 was revised before the YMQAD audit YMP-94-08. LANL-YMP-QP-03.5, R3 states in part:

**6.3 Notebook Data Evaluation**

6.3.2 Rejected data are labeled with a statement such as, "Theses data are unacceptable and are not to be used for licensing," and the employee making the entry signs and dates the statement.

The PI is responsible (accountable) for the following:

6.3.3 If the data are suspicious or have been compromised because of equipment malfunction (e.g., M&TE accuracy) or failure during routine daily analysis or experimentation, the responsible PI ensures that the data are evaluated for acceptance and rejection by a qualified individual. Rejected data are labeled in accordance with subsection 6.3.2.

The following notebooks will be reviewed for rejected data in accordance with LANL-YMP-QP-03.5, R3:

TWS-INC-01-93-12; TWS-CST-02-94-03; LA-CST-03-94-013; TWS-INC-06-93-09; & TWS-INC-01-93-10.

**Responsible Individual:**

C. D. Tait

**Anticipated Completion Date:**

November 18, 1994

**B. Extent of the Deficiency:**

Not required for this Corrective Action Request per block 11, page 1 of CAR-081.

**C. Root Cause Determination:**

Not required for this Corrective Action Request per block 11, page 1 of CAR-081.

**D. Corrective Action to Preclude Recurrence:**

Not required for this Corrective Action Request per block 11, page 1 of CAR-081.

Responsible Individual:

C. D. Tait

C. D. Tait

Response Approved:

S. L. Bolivar

S. L. Bolivar, LANL QAPL

Date: 09/15/94

**OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.**

8 CAR NO.: YM-94-079  
PAGE: 1 OF 1  
QA

**CORRECTIVE ACTION REQUEST**

1 Controlling Document LANL-INC-DP-35, REVISION 2		2 Related Report No. YMP-94-08	
3 Responsible Organization LANL-YMP		4 Discussed With C. Drew/C. Tait	
5 Requirement: INC-DP-35, Revision 2, Paragraph 6.22, third sentence requires at least two buffers that have Ph values surrounding the expected Ph of the solution to be measured, be selected for calibration of the Ph meter.			
6 Adverse Condition: Contrary to the above requirement, buffers of Ph 7 and Ph 10 were always selected regardless of the expected Ph. Five examples of this condition were noted in scientific notebook TWS-INC-01-93-12, Pages 10, 13, 14, 21, and 88, where the actual Ph value was notably outside of the 7 to 10 Ph range.			
9 Does a Significant Condition Adverse to Quality exist? Yes ___ No <u>X</u> If Yes, Check One: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E		10 Does a stop work condition exist? Yes ___ No <u>X</u> ; If Yes - Attach copy of SWO If Yes, Check One: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C	
		13 Response Due Date: 20 Working Days From Issuance	
11 Required Actions: <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Extent of Deficiency <input type="checkbox"/> Preclude Recurrence <input type="checkbox"/> Root Cause Determination			
12 Recommended Actions: 1) Change procedure to more clearly specify buffers to be used:			
7 Initiator Paul L. Cloke <i>Paul L. Cloke</i> 5/23/94		14 Issuance Approved by QADD <i>[Signature]</i> for Date 8.24.94	
15 Response Accepted QAR <i>[Signature]</i> Date 9/28/94		16 Response Accepted QADD <i>[Signature]</i> for Date 9.29.94	
17 Amended Response Accepted QAR Date		18 Amended Response Accepted QADD Date	
19 Corrective Actions Verified QAR <i>[Signature]</i> Date 1-24-95		20 Closure Approved by: QADD <i>[Signature]</i> for Date 1-26-95	

**Verification of Corrective Action**

**CAR No. YM-94-081**

**1/24/95**

During the course of audit YM-AR-95-06, T. J. Higgins, a member of the audit team reviewed the corrective action required by this CAR. A randomly chosen sample of two of the five cited scientific notebooks were examined. These notebooks were TWS-CST-02-94-03 and TWS-INC-01-93-10. Both were determined to be acceptable and this CAR is recommended for closure.

*Verification: 1-13-95.*  
*This report. 1-24-95*

OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.

<sup>8</sup> CAR NO. \_\_\_\_\_  
PAGE \_\_\_\_\_ OF \_\_\_\_\_  
QA

**CORRECTIVE ACTION REQUEST (CONTINUATION PAGE)**

CORRECTIVE ACTION RESPONSE FOR CAR NO. YM-94-079: Page 1 of 1

**A. Remedial Action:**

**NOTE:** 1. Equipment and Hardware/Software Section 6.2.2 is more restrictive than Section 6.5.1 of LANL-INC-DP-35, R2.

2. Standards are not available at the upper and lower end of the pH scale thus making implementation of Section 6.2.2 not possible for samples at either end of the pH scale.

1. The impact in notebook TWS-INC-01-93-12 of sample pH measurements not encompassed by pH standards will be evaluated and documented.

2. LANL-INC-DP-35, R2 will be revised to facilitate implementation and correct discrepancy between Section 6.2.2 & 6.5.1 requirements of pH standards used with sample measurements to permit documented:

a) measurement beyond range of available standards (e.g., ends of the pH scale)

b) limited extrapolation beyond standards used (e.g., +/- 2 pH units)

**Responsible Individual:**

C. D. Tait

**Anticipated Completion Date:**

November 15, 1994

**B. Extent of the Deficiency:**

Not required for this Corrective Action Request per block 11, page 1 of CAR-079.

**C. Root Cause Determination:**

Not required for this Corrective Action Request per block 11, page 1 of CAR-079.

**D. Corrective Action to Preclude Recurrence:**

Not required for this Corrective Action Request per block 11, page 1 of CAR-079.

Responsible Individual:

C. D. Tait

C. D. Tait

Response Approved:

S. L. Bolivar

S. L. Bolivar, LANL QAPL

Date: 09/15/94

Verification of Corrective Action

CAR No. YM-94-079

1/24/95

During the course of audit YM-AR-95-06, two audit team members: Paul Cloke, Technical Specialist, and T. J. Higgins, ATL, reviewed the historic impact of this condition as recorded in scientific notebook TWS-INC-01-93-12, as well as revision 3 to the procedure which was also a corrective action. Both were determined to be acceptable and this CAR is recommended for closure.

Verification: 1-11-95

This report: 1-24-95

A handwritten signature in black ink, appearing to be 'T. J. Higgins', written in a cursive style.